

Unemployment in India: Analysis and Insights

Created by: J. Takeshwar

Introduction

This project focuses on analyzing unemployment trends in India using data collected from various regions. The dataset provides insights into key economic indicators such as unemployment rate, employment estimates, and labour participation rates.

Dataset Details

The dataset contains information on unemployment trends across different states/regions in India. Below are the key details of the dataset:

- Total Entries: 768
- Columns: 7
 1. Region: State/region names.
 2. Date: Data collection date.
 3. Frequency: Data collection frequency (e.g., monthly).
 4. Estimated Unemployment Rate (%): Percentage of unemployment.
 5. Estimated Employed: Number of employed individuals.
 6. Estimated Labour Participation Rate (%): Labour force participation percentage.
 7. Area: Categorization into rural or urban areas.

Methodology

The analysis is performed using Python libraries such as pandas, matplotlib, and seaborn. The workflow includes:

1. Loading and exploring the dataset.
2. Preprocessing data: renaming columns, handling missing values, and converting date formats.
3. Conducting exploratory data analysis (EDA) to identify trends and patterns.
4. Visualizing unemployment rates over time and across regions.
5. Analyzing the impact of events like Covid-19 on unemployment.
6. Performing correlation analysis to identify relationships between variables.

Key Findings

The analysis revealed several insights:

- The distribution of unemployment rates shows significant variation across regions.
- Covid-19 had a noticeable impact on unemployment rates, with spikes observed during the pandemic period.
- Regional differences in unemployment rates are evident, with rural and urban areas displaying distinct patterns.
- Correlation analysis highlighted relationships between unemployment rates, labour participation rates, and employment estimates.

Conclusion

This project demonstrates how data analysis can provide valuable insights into economic trends. The findings can guide policymakers and stakeholders in addressing unemployment challenges and fostering economic growth.